

ST. BARTHOLOMEW'S



HOSPITAL JOURNAL

WAR EDITION

Vol. 2

MAY 1st, 1941.

No. 8.

THE LUFTWAFFE AGAIN

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than the editorial staff. If any of our readers who have recently sent material for the JOURNAL find that it has been omitted from this number, we would be grateful if they would send us another copy for future publication.

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MORE THAN MEMORY

To educate a medical student takes nearly twenty years. For so long is he a fledgling, fed by his teachers with pre-digested nourishment, that it would not be surprising if at the end his powers of digestion were non-existent. His wretched brain is so stuffed with the facts, figures and occasionally fancies of his teachers that no thought of his own dare intrude into so august an assembly. This prolonged forced feeding, as geese are stuffed for *foie gras*, achieves its immediate object: the goose becomes excellent *foie gras*, the student a tolerably good doctor. But in the process the student (and this may also apply to the goose) becomes oblivious to the outside world. He cannot, while a student, achieve responsibility, either of decision or action, in medical matters, so he does not accept any responsibility for affairs outside his lecture room. In short, while medical education produces enough competent doctors, it produces too many incompetent citizens.

This country—nominally at least—is a democracy, and outside the hospital a student's share in the responsibility of government is as great as that of his teacher, and greater than that of most people; for his intelligence is probably above the average of the population, and, moreover, he has received a scientific education which should have developed a critical and enquiring mind. But too often his ability to think and act for himself is never exercised, because of the abnormal prolongation of adolescence in which he is compelled, and frequently content, to live. Many of his contemporaries now in the fighting services from which he is debarred are captains or flight-lieutenants, regarded by the country with considerable respect, and one might have thought that their example would stimulate him to emerge from his chrysalis into adult life; but he has shown no urge for this metamorphosis, remaining content to be less than the dust inside his hos-

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pital, and nothing at all outside its gates.

Unfortunately such a sub-adult attitude is by no means confined to medical students. It is perhaps the principal curse of democracy. Most people in this country do not seriously concern themselves with the affairs of the nation except in so far as they immediately affect their own profession, business or factory, and the more intelligent members of the community are frequently the worst offenders in this respect. It is left to the fools to make a noise in the world. Whether Nazi, Fascist, Communist or Blimp, one system of ideas has

penetrated their otherwise impervious skulls, and they shout their doctrines with all the persistence of a gramophone needle stuck in one groove.

This war was caused, at least in part, by the blindness (deliberate or not) of the intelligent people of this country. The only hope of a substantially better post-war world is if they can be persuaded to think clearly and intensively about problems, not of reconstruction but of new construction, and can make themselves heard above the babblings of the fools.

ALL YOUR OWN WORK

In a letter published in this issue, Dr. Hinds Howell has rightly pointed out the inadequacy of the report of a case of "cerebellar apoplexy" in our April number. These case-reports from students seem to be popular features of the JOURNAL, and since the JOURNAL is primarily written for, if not by, students we are eager to publish as many of them as we receive. However, very few are sent to us, and of

these most are written both inaccurately and carelessly. The Publication Committee is thus placed in a very difficult position, being compelled to reject the very material it would specially wish to publish. The remedy lies with the students; if they wish to see these reports in the JOURNAL they must both contribute more reports, and write them with far greater accuracy than is now the fashion.

The Editor apologises for the misspelling in our last number of the names of Sir Clifford Allbutt and Mrs. J. N. Keynes.

June Issue.

Contributions for the June issue should be received not later than May 15th.

CELESTIAL VALENTINES

BY KENNETH WALKER

THE valentines I send you are utterly out of date, but what do a few months matter in the course of twenty-two centuries? For the writer of the valentines lived as long ago as that. But you may have another objection to their publication, an objection that is less easily overruled. This is not really my own contribution, but one from the brush of an ancient Chinese. To my way of thinking this is an advantage. Has it not recently been pointed out in a review in this Journal that my pen is over-driven? This at least will show that I have taken the lesson to heart. Sages are as rare as white elephants, and Chaung Tzu is perhaps one

of the greatest of all the poets and sages of a country that is rich in them. For the first time in the history of the Journal a great sage is sending a contribution. I hope you feel, as I do, that it is a solemn moment. My responsibility is limited to directing his sayings to those to whom they seem most applicable.

To those in doubt about their position in the E.M.S.:

"A keeper of monkeys said with regard to their rations of chestnuts that each monkey was to have three in the morning and four at night. But at this the monkeys were very angry, so the keeper (read

Ministry of Health) said that they might have four in the morning and three at night, with which arrangement they were all well pleased."

To the unskilful surgeon, advice from the cook of Prince Hui :

"A good cook changes his chopper once a year—because he cuts. An ordinary cook once a month—because he hacks. But I have had this chopper nineteen years, and although I have cut up many thousand bullocks, its edge is as fresh as if fresh from the whetstone. For at the joints there are always interstices, and the edge of a chopper being without thickness, it remains only to insert that which is without thickness into such an interstice."

To students of Dream Psychology :

"Once upon a time I, Chaung Tzu, dreamt I was a butterfly, fluttering hither and thither, too all intents and purposes a butterfly. I was conscious only of following my fancies as a butterfly, and was unconscious of my individuality as a man. Suddenly I awakened, and there I lay, myself again. Now I do not know whether I was then a man dreaming I was a butterfly, or whether I am now a butterfly dreaming I am a man."

To the disheartened :

"A man who knows he is a fool, is not a great fool."

To certain of my contemporaries who resent the idea of change :

"For travelling by water there is nothing like a boat. For travelling by land there is nothing like a cart. This because a boat moves readily in water; but were you to try to push it on land you would never succeed in making it go. Now, ancient and modern times may be likened unto water and land; Chou and Lu to the boat and the cart. To try to make the customs of Chou succeed in Lu, is like pushing a boat on land: great trouble and no result, except certain injury to oneself. Your master (Chaung Tzu referred here to Confucius) has not learned the doctrine of non-angularity, of self-adaptation to externals."

(Chou and Lu were ancient and modern Chinese dynasties in the time of Chaung Tzu.)

To the disgruntled scientist :

"Alas! Man's knowledge reaches to the hair on a hair, but not to eternal peace."

To those who ape their betters :

"When Hsi Shih (a famous Chinese beauty) was distressed in mind she knitted her brows. An ugly woman of the village, seeing how beautiful she looked, went home and, having worked herself into a fit frame of mind, knitted her brows. The result was that the rich people of the place barred up their doors and would not come out, while the poor people took their wives and children and departed elsewhere. That woman saw the beauty of knitted brows, but she did not see wherein the beauty of knitted brows lay."

To all of us :

"It was the time of autumn floods. Every stream poured into the river, which swelled in its turbid course. The banks receded so far from each other that it was impossible to tell a cow from a horse."

"Then the Spirit of the River laughed for joy that all the beauty of the earth was gathered to himself. Down with the stream he journeyed east until he reached the ocean. There, looking eastwards and seeing no limit to its waves, his countenance changed. And as he gazed over the expanse, he sighed and said to the Spirit of the Ocean: 'A vulgar proverb says that he who has heard but part of the truth thinks no one equal to himself. And such a one am I. . . I did not believe. But now that I have looked upon your inexhaustibility—alas for me, had I not reached your abode, I should have been for ever a laughing stock to those of comprehensive enlightenment!'

"To which the Spirit of the Ocean replied: 'You cannot speak of ocean to a well-frog—the creature of a narrower sphere. You cannot speak of ice to a summer insect—the creature of a season. You cannot speak of Tao to a pedagogue—his scope is too restricted. But now that you have emerged from your narrow sphere and have seen the great ocean, you know your own insignificance, and I can speak to you of great principles.'"

I end as I began: Why write oneself when one can borrow from Chaung Tzu?

"POISON PEN"

Boldness was rewarded when the Hill End Bart.'s Players undertook Richard Llewellyn's difficult play and made of it an outstanding success. Three performances were given in the Reception Hall on March 21st, 22nd and 23rd, and although there were a number of tense passages which, with less competent handling, might easily have brought the performers on the rocks of ridicule, yet all of them were manoeuvred with skill. E. Mackay-Scolley is to be congratulated on his admirable production and casting.

The scenic, sound and lighting effects deserve special mention. Goodall-Copestake was responsible for designing some excellent sets of scenery, both interior and exterior, and the organ music on the radiogram added a touch of realism to the atmosphere.

To single out individual members of the cast for congratulation when all played so effectively becomes invidious. Mention must first, of course, be made of Clarence Martin as the Reverend John Rainrider and of Jean Sawers as his sister, for these two bore the brunt of the play upon their shoulders. Martin gave a convincingly natural performance as the conscientious vicar—no mean achievement—and Miss Sawers did well with the most difficult part in the play. Her final exposure and hysterical outburst were perhaps her best piece of acting, though the morbidity of Phryne's mind might have been allowed expression a little earlier, without giving away any secrets.

Kathleen Rees also proved herself an actress of ability in the part of the village girl who committed suicide.

The best acted dialogue, to my mind, was that between Gordon Ramsay and Barbara Taylor. As an engaged couple embarking on their first quarrel they were witty in their manner and quick on their cues. They acted with a pleasing assurance, which was also evident in the broad comedy of Kathleen Baker. This lady's stage husband, Frank Morris, gave a quietly efficient performance as the police inspector, though he seemed a singularly ill-matched spouse. Brenman gave a first-class character study of a simple villager and Boroda made a suitably sinister sexton. The other smaller parts were competently filled by

Lysbeth English, Joan Shirreff, Peggy Baldwin, Lorna Jack and Messrs. Morse, Gray and Fox. It is to their credit that they could always be distinctly heard.

Hugh Bentall was Stage Manager, and to add that the make-up was by Bert is a sufficient testimony to its quality.

The scope for the latent dramatic talent in the hospital has been encouragingly widened since the enlightened lifting of the traditional ban against nurses acting with students. The Bart.'s Hill End Players have shown what they can do, and we look forward very much to seeing them more often.

E. C. O. J.

* * * *

OUR CANDID CAMERA



"Bring in the Heretics!"

RECONSTRUCTION OF MEDICAL SERVICES

By GEOFFREY EVANS, M.D., F.R.C.P.

The British Medical Association has taken the initiative in setting up a Commission to consider the reconstruction of Medical Services post-war. The Nuffield Trustees are actively engaged on the same subject now. The Government are fully alive to the problem and the Ministry of Health may be making its plans.

The need for reconstruction is generally agreed. In the last war the findings of Recruiting Boards were so poor that pessimists dubbed us a C3 nation. In this war the health of the nation has been found much improved, and still there is scope for greater improvement. This will be achieved by health education. The people will be taught the value of body building foods and how to cook them. It is expected that slum clearance will continue, that more playgrounds will be provided for the people, and a better water supply made available in rural areas. These are but a few examples of the direction in which the Ministry of Health will expand its activities after the war. In the meantime the Ministry of Food are increasing the average Vitamin B1 intake by 150 international units daily by the provision of National Wheatmeal Bread.

The prevention of disease has for years past been the concern of the State. The Public Health Act 1875, the Public Vaccination Act, numerous Factory Acts, Infectious Fever Acts, the Maternity and Child Welfare Act 1918, and the Public Health (Tuberculosis) Act 1921, are witness to this. In general terms it may be said that when a disease is more important in its relation to the community as a whole than to the individual who has the disease, the Government steps in to take control. Thus epidemic disease of certain kinds is notifiable, is segregated, and provision is made for its treatment. Fever hospitals are provided for certain of the infectious fevers, sanatoria for tuberculosis and clinics are provided for the diagnosis and treatment of venereal disease. By the Cancer Act of 1939 means for the early diagnosis of cancer and its treatment by modern methods are made so available to the public that even the cost of transit from the subject's home to the treatment centre is provided for. In recent years it has been more generally recognised that an amount of preventable injury is sustained by infants at birth. It is

to be expected, therefore, that the State will interest itself in birth control (a phrase which has been used in the past to promote birth prevention) by insisting that all babies are born under the supervision of skilled obstetricians in institutions provided for the purpose, for as the birth rate falls each individual born is of increasing value to the State. We may regret this loss of freedom, but we shall regret it less as we recognise that our survival as a race is at stake. In addition to these Acts there are others, including for example those that provide for Mental Illness, Mental Deficiency 1913, and Blind Persons 1920, by which the expense to healthy persons of incurable states in their kith and kin is borne by the State.

A noteworthy contribution by the State to the treatment and cure of disease was made by the Local Government Act 1929 by which the functions of the Poor Law authorities were transferred to the County Councils and County Boroughs. As a result of this Act an immense improvement in the administration, equipment and medical service of the infirmaries, now known as municipal hospitals, has been effected. This was the first real challenge to the Voluntary Hospital system, though not the first occasion on which its survival was questioned.

It will be seen from this necessarily incomplete survey of State interest in the health of the Nation, and in the prevention and treatment of disease, that there is already a large public health service running to a large extent independent of and parallel to the private medical services provided by the Voluntary Hospitals and by the general practitioner, consultant and specialist services of the country. It might seem to be in the natural order of events, almost as it were as a matter of natural growth, that after the war we should have a State Medical Service with all hospitals under State control and medical personnel whole-time servants of the State. The institution of such a service would have obvious advantages. The finance of the Voluntary Hospitals has proved a considerable difficulty in the past 30 years for well-known reasons. Thus they are doing work now of much higher order than they did 30 years ago. The number of their beds is increasing at the rate of 1,500 to 2,000 per annum. The expense per bed per annum is yearly increasing on account of the improved conditions in

the hospitals, the greater cost of nursing, and expense of medical and surgical treatment and ancillary services.

After the Great War the impoverished state of the Voluntary Hospitals led to the setting up of a Voluntary Hospitals Commission by the Minister of Health (1921), and a grant of £500,000 was made by Parliament to the Voluntary Hospitals. In 1936 the British Hospitals Association set up a Commission under the Chairmanship of Lord Sankey. This Commission came to the conclusion that the weakness of the Voluntary Hospital system could be almost summarised in terms of finance. After the war poverty may prevent the support of the Voluntary Hospitals by the charitable public. There is, too, a body of opinion that dislikes charity. This opinion may recognise the gain that accrues to those who give but thinks it degrading to receive. It would seem that there is no loss of dignity or independence in dependence on the State because it is presumed that there is a right to live, a right to work for a sufficient wage, a right to a pension in old age, and certain other rights, including the right to medical treatment at State expense. By the institution of a State Medical Service all Voluntary Hospitals would pass under State control, the finance of these institutions would be provided for, competition and overlap with Municipal and County Hospitals would be done away with, small uneconomical units would be closed and "privilege" (a popular word just now) abolished.

On account of the increasing number of voluntary hospital beds and the more exacting service required of the honorary medical Staff which serves these hospitals, many members of the profession would welcome the absorption of the Voluntary Hospitals into a State Service. It would mean payment for hospital services on at least a moderate scale, and presumably such services would carry a pension on retirement. It will be agreed, too, that a proportion of the profession would be glad to enter a salaried service for domiciliary work. This work in private practice entails long hours of work by day and night too. There may be no off-duty time; it may mean seven days' work a week and night work in addition. Too large a proportion of accounts may be unpaid. There is often considerable financial uncertainty about the future. With taxation at its pre-war level it was difficult to save sufficient capital to provide an income in old age. The profession has experience of the value of an assured income derived

from Panel Practice. At the time that this practice was instituted by the Insurance Acts it meant a payment of six million pounds per annum to general practitioners. Had the dependents of insured persons been included it would have cost the Treasury another 13 million pounds per annum. There are many doctors who feel that they cannot do their best for their private patients who are not on the Panel because additional visits they would like to pay are an extra cost to their patients. They would like to be salaried medical officers with charge of a district free to visit their patients according to the patients' need, responsible for their health as they are responsible for them in illness, working for limited hours in each week, their locums paid while they take their annual holiday, opportunity provided for post-graduate study, provision for themselves and their families in sickness; and, above all, uncertainty as to the future removed by the prospect of a pension on retirement from practice.

A State Medical Service will likewise make its appeal to the people because it will in a sense be free. At present serious illness may be a financial catastrophe. Present medical service is uneven in its value, varying between incompetence and neglect at its worst to something better than is to be found in any other country at its best. Under State control the medical service of the nation would surely be raised in its average level.

That the majority do not accept the prospect of a State Medical Service and salaried personnel without misgiving is largely due to fear that it would limit freedom of choice of their doctor, not only as regards their general practitioner, but also in regard to ancillary (clinical pathology, X-ray diagnosis, physiotherapeutic services, etc.), specialist and general consultant services. Medical personnel would necessarily be standardised, its work regularised, and its conduct at every step subject to immediately superior authority. Doctors, too, would lose their freedom. Anyone who has served in a salaried position knows the risk of questioning superior authority and the danger of going against it. If a medical officer in a Council service risks grave disagreement with his committee on a matter of principle, in any contest to which this gives rise, he can comfort himself with the knowledge that were he to lose his post or forfeit promotion he can resign his appointment and take up general practice. From the point of view of both the public and the profession, a State Medical Service

would mean promotion according to seniority and administrative ability. Every effort would be made to accelerate the promotion of the better medical officers by giving precedence to those with higher qualifications and to those with special knowledge. At the same time we are only too fully aware of the fact that British genius does not excel in large scale organisation. The incompetence of our Civil Service is evidence of our failure to produce efficiency in an organised human machine. The incompetents cannot be degraded: the mass of inertia provided by those who do their work without zeal or energy baulks the efforts of those who outdistance them in efficiency and achievement.

The leaders of the democracies tell us that we are fighting for freedom, and they tell us that freedom is the essence of democracy. I find it difficult to believe that freedom is the essence of our English life. It is so largely curtailed by conscience, duty and responsibility, not to mention economic necessities, that its scope is strictly limited in a highly civilised community. The crux of the matter is the object of the individual's loyalties. In the Nazi, Fascist and Bolshevik regimes, the people are persuaded that their loyalties are to the State. In England we have always believed, and we have acted on the belief, that our first loyalties are to the individual life. We seem to realise the sacredness of life and recognise a soul. It is this which gives to each of us an individuality and important identity. We acknowledge and accept responsibility for ourselves, for our families, for our fellows, and only after this do we take an interest in the State. In general terms we trust most with the affairs of state those who have given evidence of their ability to meet and discharge their responsibilities to themselves, their families and their fellow men. It will be a change in the attitude of Englishmen, it will be something new in the long history of our nation, if we become State servants and dependent on the State.

An opinion founded on this belief would encourage every man to provide for himself and his family. For those with energy and ambition there is every opportunity to help others, and the tallest trees in the forest will support and guide the State. Such a conception finds in the Voluntary Hospital System one of the bulwarks of our democratic structure. It finds in the Governing Body of the hospital a voluntary service for the cause of humanity, and in its President and Treas-

urer personal responsibility for the conduct of its affairs. In its Honorary Staff there is opportunity for self-sacrifice and voluntary service, and in its Nursing Service a tradition which has its origin in religious service, and is imbued with the vocational spirit. If finance, as is feared, proves a difficulty, it will be met by an improvement in the services rendered, and by an increased payment for these services. As a result we may look forward with some confidence to the hospitals for the poor being paid for by the poor. If there is some deficit in the finance of an institution it may be found to be due to work done in it being below standard, to inefficiency in control or extravagance in expenditure. We must look forward to co-operation between Voluntary and Local Authority Hospitals and co-ordination of their services. The public must be encouraged to support their local hospitals to an even greater extent than they do at present, and they must be taught in and out of season the ideal of personal responsibility for the welfare of others as well as for themselves. Some form of State subsidy will probably be necessary on a larger scale than at present. There is State subsidy in fact already, in the form of university grants to hospitals with medical schools. We have already had experience of a large grant by the Treasury to Voluntary Hospitals as a whole. In the future individual hospitals may look to the Treasury for support, and with it they will accept some measure of control. But so long as they perform their service efficiently they will retain their autonomy. The Honorary Medical Staffs are already paid in many hospitals, either in the shape of fees paid to those who teach at Medical Schools, in the form of small honoraria paid by the Governing Body, or in some cases as a proportion of the payments made by patients. If these small payments are increased, as they should be, especially in view of the increasing tax on the profession of hospital service, then the appointment of a member of a Hospital Staff will require to be regularised by making all appointments open, and the Election Committee a trustworthy and disinterested body. Something in the nature of a formal agreement should be entered into by the elected member and the Governing Body.

For the general practitioner of the future it is essential that the ancillary services should be available at moderate cost. This applies particularly to the provision of clinical-

pathological services and X-ray diagnosis. Public Health Laboratories would also be open for his use. Specialist and consultant services must be available more easily and at lower cost than at present. These changes are already envisaged in the regionalisation of hospital services which is being planned by the Nuffield Trust. In addition, I suggest the creation of visiting boards of consultants, specialist and general, who would travel as do the Justices of Assize, to see patients in hospital, to do private consultations from the hospital centre, and to lecture on subjects of general educational or topical interest.

The general practitioner of the future must have opportunity for post-graduate study at regular intervals, and he must have the *entrée*, as far as is possible, for attendance on his patients at his local hospital, and again, so far as is possible, he must be attached to this hospital in a professional capacity. To give him time for this additional work he will expect the inclusion of the dependants of insured patients under the National Insurance Acts, and if necessary an increased *per capita* payment. In rural areas, where his patients live in a widely scattered area, a subsidy would be paid on a mileage basis, for patients living outside a certain radius.

Improvements in medical practice on these lines will cost money, and the money should be found by those who receive the services thus improved or provided. The extension of the present Hospital Savings Association Scheme to include income limits of a married man with dependants to £400 per annum. the King's Fund Provident Scheme to include incomes up to £1,000 per annum. and insur-

ance schemes for incomes above this limit, are means of providing for the expense of serious illness which can be expanded and adapted according to need.

A successful planning of post-war medicine on these lines would build the future on the present practice, and it would leave intact the individual's responsibility for and interest in his own welfare. It would retain the personal relation between the patient and his doctor as well as the opportunity for personal service by the doctor which this relationship entails. In contrast to this a State Medical Service with whole-time salaried personnel would emphasise the professional attitude to disease; it would undermine the doctor's personal responsibility for his patient at the same time as it would weaken the patient's responsibility for his own health. His health and sickness would become the care of the State, and a servant of the State would provide for both. Members of the profession who distrust the future of private practice may find comfort in the reflection that uncertainty is stimulating. To aim for security in the shape of a salaried service and a pension in old age, though stultifying, will always appeal to some; but to force such terms of service on the whole profession will destroy for many the zest they have in their work, and the personal satisfaction of doing it. For the public at large, the doctor who is at once their adviser and friend will be replaced by a salaried official whose interest in his practice will be largely impersonal, and whose advancement will depend more on professional status than on the personal service he gives to his patients.

CORRESPONDENCE

THE METRIC SYSTEM

To the Editor, *St. Bartholomew's Hospital Journal*

Sir,

In a footnote to my article in the March number of the JOURNAL you query my use of the term "unfortunate" when I refer to the fact that the metric system is officially recognised in the British Pharmacopoeia. Perhaps I should have said that the metric system is semi-official, for both sets of measures are given to indicate the doses of drugs. To my mind the use of the metric notation in prescribing can only be justified if and when the decimal system is adopted as the official standard in this country; at present this is not the case, and

there seems to be no reason why there should be a change in our time-honoured method of writing prescriptions unless there is to be a uniform alteration in our other standards of measurement at the same time.

Not only this, but the sponsors of the Pharmacopoeia have been half-hearted about the business. They do not use true metric measures but content themselves with a literal translation of the Apothecaries dose into metric figures; hence it happens that the official doses of drugs are stated in a bastard terminology which would certainly never be sanctioned or employed by a devotee of the metric system. For instance, we are told that the dose of Barbitone is 0.3 to 0.6 G., or its literal translation, 5 to 15 grains. Sodium Salicylate is

0.6 to 2 G. or 10 to 30 grains, and Morphia 0.008 to 0.02 G. or $\frac{1}{4}$ to $\frac{1}{2}$ grain. In actual prescribing I have seen ludicrous results from trying to follow the metric system in the wards at Bart's. A pill may be prescribed containing 64 mgms. of Digitalis Folia for example; yet who ever heard of 64 mgms. as a metric quantity? I could quite understand the sense of prescribing 50 or 75 mgms., or even 60 mgms., but I can only interpret the quantity stated as meaning that the prescriber wishes the patient to have one grain of the drug and at the same time wishes to make himself believe that he is being more progressive than those who use the old notation; I am sure that the dispenser produces, and the patient receives, one grain either way and I fail to see that any advantage has been gained by altering the terminology. I can well imagine the surprise of all concerned if such a prescriber were to order 284 mls. of pre-prandial liquid refreshment in circumstances in which an order for half a pint would be fulfilled without comment.

It seems to me that the adoption of the metric system as applied to prescription writing has little to commend it, but that to some it conveys a sensation of being scientific and progressive. Anything which is different from that which is well established is apt to be regarded as an improvement, but I do not personally regard the words "alteration" and "advance" as being synonymous.

Yours truly,

JAMES MAXWELL.

IN DEFENCE OF THE L.C.C.

To the Editor, *St. Bartholomew's Hospital Journal*

Dear Sir,

The anonymous article entitled "Medicine and Sociology" in the March issue contains the following statement: "The alternative is to adopt a system akin to that of the L.C.C. to-day, where an order from a superior medical official states clearly how a disease is to be treated, a system which would destroy all art in medical practice."

This statement is entirely untrue: I have worked in numerous L.C.C. hospitals for nearly 10 years, and in no case to my knowledge is this the practice: on the contrary, responsible doctors in the L.C.C. service are encouraged to make full use of any advances in knowledge, from wherever they may originate. Inexperienced medical officers and house physicians may indeed receive advice or instructions from their seniors, as in any hospital, municipal or voluntary. Perhaps your correspondent does not approve of this, and would prefer a hospital to be run entirely by house officers without advice or instruction from the honorary staff: this system would doubtless give the house officers valuable experience, but is not conducive to the best treatment of the patient.

Yours faithfully,

E. N. ALLOTT.

69, Downs Hill, Beckenham.

March 24th, 1941.

WE ARE REPROVED

To the Editor, *St. Bartholomew's Hospital Journal*

Dear Sir,

In the current number of the JOURNAL you published "A Case of Cerebellar Apoplexy." It is a matter for regret that this very interesting case was so inadequately recorded. (The report on the Cranial Nerves must have escaped the Editorial eye!) It would appear to have been an example of thrombosis of the posterior inferior cerebellar artery, giving rise to the "lateral medullary syndrome." This results from softening on the lateral aspect of the medulla extending from the inferior cerebellar peduncle to the inferior olive. The apparent Chinese puzzle in the matter of physical signs which results seems strange and formidable unless the anatomical pattern of that part of the medulla is remembered.

Such cases usually improve greatly with time. A similar catastrophe happened to an old Bart's man, a Governor of the hospital, when well up in the seventies—in spite of which he was out shooting again next season.

Yours faithfully,

C. M. HINDS-HOWELL.

149, Harley Street, W.

April 8th, 1941.

WE ARE REPROVED AGAIN

To the Editor,

St. Bartholomew's Hospital Journal.

Sir,

Those of your readers who were fortunate enough to have the early months of the war brightened for them by the pages of "Argent and Sable" will have noticed a curious similarity between the contribution of "Sabreur" to your April issue and an article entitled "A Forgotten Page of 'Price'" which appeared in the issue of that journal dated December 24th, 1939. Since copies of the latter are now valuable rarities, it may have been difficult for many who were struck by this similarity to make the direct comparison which should suffice to indicate to the least discerning reader that the two articles were not of one and the same authorship. We, therefore, who had the honour to be joint editors of "Argent and Sable," venture to trespass upon the hospitality of your columns in order to resolve any possible doubts on this point. We cannot, of course, pretend to any knowledge of the identity of your contributor, but we can state definitely that "Sabreur" was not the author of "A Forgotten Page of 'Price'."

That no better model could be found for the aspirant to literary success than the contents of "Argent and Sable" we have long believed, and we congratulate you, Sir, on your perspicacity in thus showing the way to the budding authors in whom this Hospital doubtless abounds. But may we, at the same time, take the liberty of begging you to impress upon your contributors the virtues of originality of style or, if that be an unattainable ideal, to persuade them at least to subscribe to the common courtesy of acknowledgment of the source of their inspiration?

We remain, Sir,

Your obedient servants,

THE JOINT EDITORS OF "ARGENT & SABLE."

ON THE CORPUS STRIATUM AND THE EXTRAPYRAMIDAL MOTOR SYSTEM

By C. G. PHILLIPS.

In spite of its place of honour in neurological literature, the term "extrapyramidal motor system" has grave shortcomings. So far from displaying that precision which can alone endow a scientific term with descriptive or heuristic worth, it thinly cloaks a profound ignorance of the structure and functions of a large mass of brain tissue. Critical discontent has not, however, been altogether wanting. "Contrairement à nombre de neurologistes français et étrangers," writes Lhermitte (1933) in an admirable review, "je ne pense pas que l'expression 'extrapyramidale' soit heureuse: les termes, en vérité, en sont beaucoup trop compréhensifs et imprécis." This is well said of a term which might seem to embrace, implicitly if not explicitly, all supraspinal postural and motor mechanisms other than the Betz neurones. Yet criticism would now have to recognise some strivings towards an adequate morphological and physiological definition of the extrapyramidal system. Thus Fulton (1938), for example, describes in it two main divisions, a cortico-strio-nigral and a cortico-ponto-cerebellar. Both are especially concerned with muscle posture; both interact chiefly at the cortical level. All recent evidence suggests that the original view of Magnus and Rademaker, that all postural reactions are integrated at and below the level of the red nucleus, must be discarded, even, it seems, in the case of some of the lower mammals with which they dealt. (See appendix.)

Anatomically, there is a crucial difference between the extrapyramidal and the pyramidal motor systems. In the pyramidal system, it is the Betz cell axones which themselves form synapses with internuncial neurones in the spinal grey matter. In Foerster's expression, these axones constitute the "fast-train connection" between the cerebral cortex and the lower motoneurones.* The extrapyramidal fields of the cerebral cortex, on the contrary, possess only "slow-train" connections with the spinal cord, by way of relays in the basal ganglia, cerebellum and brainstem centres.

The physiological properties of the two systems, in so far as they are at present

understood, are also strongly contrasted. As we have seen, numerous synapses lie along the extrapyramidal pathways: and at each intermediate level of the system there must be scope for interplay of fringed patterns of excitation and inhibition in a fashion responsible for the shifting quality of the reactions obtained experimentally. Fulton has shown that these reactions, involving, as they do, several synaptic transmissions, are progressively depressed by deepening barbiturate anaesthesia, during which the responses of the pyramidal system—simple, phasic, apparently purely excitatory—long persist unaffected.

The motor functions of the extrapyramidal system are of the coarsest synergic quality. This point is particularly well brought out in Foerster's (1936) experiments on over 300 exposed human brains; the responses to electrical stimulation of extrapyramidal cortical fields, following ablation of the area gigantopyramidalis (area 4), differ completely from the graded, localised character of the "pyramidal" movements obtained when area 4 is intact. The main functions of the extrapyramidal system, indeed, appear to be inhibitory; such inhibition of movement, and of muscle posture, has been amply demonstrated in careful animal experiments, some of which are considered below.

Experiments on the Corpus Striatum

Of the whole extrapyramidal complex the functions of the large masses of grey matter comprising the corpus striatum are probably the most obscure. The importance of the thalamo-striate level is manifest from the differences in behaviour between decerebrate and decorticate animals; relatively highly-organised behaviour patterns, extending even to features of individual temperament, are retained by the latter (Dusser de Barenne, 1920; Schaltenbrand & Cobb, 1930; Bard & Rioch, 1937; Rioch & Brenner, 1938). But more direct experiments designed to test its specific functions have always been disappointing. This is not the place for a review of the earlier literature of the problem. Kinnier Wilson's (1914) exhaustive survey of it has been appropriated almost word for word, and often

* Cajal has brought forward good evidence that, in addition, collaterals of the pyramidal fibres establish connexion with the basal ganglia.

without due acknowledgment, by many subsequent authors. Suffice it to say that evidence has been sought in two ways: first, by stimulation or ablation of the basal ganglia of experimental animals—procedures of some crudeness, but necessary first steps in the study of uncharted regions of the central nervous system; secondly, by painstaking analysis of the clinical syndromes and pathological findings in appropriate human diseases. In this field Wilson himself (1912) made a notable advance. But neurologists themselves now admit the pitfalls of this type of approach: first, because degenerative processes confined either to the corpus striatum as a whole, or to the caudate or lenticular nuclei alone, are practically unknown; there can, therefore, be no question of the differentiation of pure syndromes, and consequently no possibility of assessing their anatomical basis. The great majority of cases so far described have shown gross structural alterations in other parts of the central nervous system. Secondly, there might be dynamic modifications of function in disease, unrevealed by actual degeneration of structure. This possibility is strikingly illustrated by such observations as that of Sachs, that an epileptogenic focus removed by subpial resection from the human cortex may show no histological abnormality. Thirdly, in interpreting the pathological findings it is, of course, always impossible to say whether the symptoms and physical signs were caused by the overactivity of lower levels released from striatal inhibition, by irritation of the striatum itself, or by the degeneration elsewhere in the brain. Objections of this kind can be urged against Wilson's (1912) "Progressive lenticular degeneration" (now identified with other closely-related conditions collectively described as hepatolenticular degeneration); against paralysis agitans with its various aetiologies; and against Sydenham's and Huntington's choreas. Laborious pathological studies of this latter familial disease by Dunlap, involving complete reconstruction of the basal ganglia from serial sections, indicate that, although there is characteristic degeneration of the small cells of the putamen and the caudate nucleus, there are invariably also grave changes in the cerebral cortex and elsewhere.

All that seems to emerge from the clinico-pathological studies is a rough differentiation, originally due to the Vogts, between

"striatal" and "pallidal" syndromes. The former, in which the putamen and caudate nucleus are mainly affected, show involuntary movements (typically athetosis or chorea) with hypotonia. The latter show rigidity and tremor. The evidence on which this distinction is based is not, however, universally accepted. A further curious point brought out by such studies is the remarkable elective action of the several pathological processes on the basal ganglia, implying some specific peculiarity in their biochemical constitution. Manganese, carbon monoxide, oxygen want, and the presumed toxins of hepato-lenticular degeneration and of kernicterus, are all cases in point. All that is known for certain is that the large cells of the globus pallidus are particularly rich in iron.

Animal experiment has yielded results scarcely less confusing. Electrolytic lesions placed in the lenticular nucleus in twenty-five rhesus monkeys by Horsley at Winson's (1914) request, though of considerable size, failed to produce any sign of involuntary movements or rigidity analogous to those of progressive lenticular degeneration; a remarkable paradox, of which Wilson was unable to give any adequate explanation. In these experiments the Clarke-Horsley stereotaxic apparatus was used for directing the electrode-tips into the brain. In recent unpublished work Botterell has obtained similar negative results. Wilson's monkeys were only allowed to survive the operation by three weeks—they were required for Marchi studies—and no bilateral lesions made. Lewy later made bilateral lesions, but most unfortunately did not avail himself of the stereotaxic-electrolytic technique; he used a bistoury, and thereby wrought much incidental damage. His monkeys showed conspicuous rigidity and tremor. Edwards

Bagg (1923) successfully introduced radium needles into the striatum in nine dogs. The radium emanation method is open to objection on the ground that the destructive process is a slowly-progressive one, possibly admitting of *pari passu* compensation; in any case there was considerable extra-striate injury. No constant "clinical" picture was obtained. More recently Morgan (1927) made unilateral lesions in the cat; again the stereotaxic method is not used, recourse being had this time to a curved probe pushed in through a drill-hole in the temporal fossa and entering the brain through the posterior rhinal sulcus. Morgan's interest was in the

main anatomical, but he records an extensive set of physical signs including "athetosis," tremor, *ipsilateral* muscular rigidity, circling to either side indiscriminately, dysphagia and "disturbances of the voice." These signs receded rapidly during the days following the operation; at the end of eight days they had almost vanished, the *ipsilateral* pupil alone remaining constricted. Thus they are thought to be irritative rather than release effects. The *ipsilateral* rigidity is an anomaly requiring elucidation. Liddell & Phillips (1940) found *contralateral* rigidity in cats in which accurately-placed electrolytic lesions had been made. There was no indication of tremor or of other "involuntary" movements, and no paresis.

Three further papers contribute usefully to any discussion of the effects of experimental striatal injury. Rioch & Brenner (1938) performed unilateral decortication on five guinea-pigs: the successful removal of both "motor" and "premotor" areas, and the integrity of the corpus striatum, were verified after death. Ten days were allowed for degeneration of corticofugal fibres; the *ipsilateral* striatum was then frozen by contact with a chilled probe. No new functional deficit resulted, and there was no recrudescence of the signs immediately following decortication. The authors conclude that in their experiments there was no complete transfer of cortical function to the striatum; but the obvious possibility of compensation by the intact cortex and striatum has to be entertained, and, in view of this, bilateral experiments would be more compelling. Richter & Hines (1938) have recorded, by means of an "activity cage," the spontaneous movement of five macaques before and after surgical injury to one or both frontal lobes. They report that unilateral ablations only give rise to a notable increase in spontaneous activity if they involve the anterior poles of the caudate nucleus and putamen; bilateral lesions, however, are effective in this respect without complementary striatal insult. Langworthy & Richter's (1939) findings in cats are similar.

Stimulation Experiments

Stimulation experiments have likewise been attended with mixed success. Those of Wilson (1914) carried out by Horsley preliminary to fulguration of the lenticular nucleus, were entirely negative, probably because the macaques were deeply anaesthetised with chloroform and ether. Pachon & Delmas-Marsalet (1924) and Miller (1936)

have elicited movements by stimulation of the head and body of the caudate nucleus. The former workers buried electrodes in the caudate of the dog under chloralose anaesthesia, secured them firmly in position by an attachment screwed into the skull, and allowed recovery of consciousness before stimulation on the following day. The mere presence of the electrodes in the brain brain caused no physical signs: their position was checked by postmortem examination. The excitability of the caudate was, however, soon denied by Wilson, who would only commit himself to a footnote statement that the results were "open to technical and interpretative criticism." Miller simply exposed the cat's caudate from above by dissection and explored it, under barbiturate anaesthesia, with uni- or bipolar electrodes. Alternatively he applied strychnine, the effects of which were identical with those of electrical stimulation and furnished strong evidence that the movements obtained are due specifically to excitation of neurones in the caudate and are not consequent upon shock-escape to the fibres of the internal capsule. Hess of Zurich has also stimulated the caudate of the waking cat. Slow flexions and extensions of the limbs of both sides, chop-licking and circling (*mouvements de manège*) away from the side stimulated have all been obtained by these investigators.

Electrical exploration of the basal ganglia of chronic decorticate preparations undoubtedly offers greater potential interest. So far as I am aware the first attempt of its kind was that of Schaltenbrand and Cobb (1930). Their cat had suffered ablation of the whole isocortex some seven months previously. The skull was reopened under local anaesthesia and the effects of the sedative drug were allowed to wear off before stimulation was begun. The results were disappointing, for it was found, on opening the calvarium more freely after death, that the exploration had been limited to the anterior horns of the lateral ventricles; and the responses had been variable, and complicated by violent forced running movements. Rioch and Brenner (1938) made similar experiments on seven cats. Adversion of head and eyes was obtained from the cut lateral surface of the brainstem, behind the head of the caudate nucleus, together with a variety of autonomic reactions, chop-licking and forced running movements.

If, as it is generally held, the functions of the corpus striatum are mainly inhibitory, stimulation of its parts should be most

instructive if carried out against a background of posture or of movement, whether spontaneous or experimentally-initiated; application of this principle has led to some suggestive findings. During an exploration of successively-caudal cut surfaces of the brainstem in an attempt to follow the sub-cortical pathway of her extrapyramidal inhibition of movement, Tower (1936) found that the lenticular complex has a much lower threshold for damping or for complete arrest of movement than the adjacent internal capsule. Rioch and Brenner (1938), in one cat of their decorticate series, were able to abolish extensor posture and spontaneous activity with perfect regularity by stimulating the head of the caudate, the action being immediately reversed on withdrawal of the electrodes. In one other animal parallel observations were made, but not invariably; two cats were still less stable and a further two gave completely negative results.

In view of this work the recent work of Mettler et al. (1939) is of particular interest. Stereotaxic electrical explorations of the basal ganglia of cats and monkeys were conducted against a background of movement elicited simultaneously by cortical stimulation. Stimulation of the caudate gave no motor responses, but cortically-evoked movements were dramatically inhibited by it—there was a “melting-away” of the cortical effect.” The threshold was found to be lower than that required for excitation of the fibres of the internal capsule; no inhibitory effect could be shown if the caudate had been fulgurated before stimulation, or if the electrode-tips were found, after death, to be misplaced in adjacent structures. The action is almost entirely confined to arrest of ipsilaterally-evoked movements, and it persists for a short time after withdrawal of the inhibitory stimulus. From the putamen and claustrum effects similar in kind, but less in degree, were obtained; in two experiments the inhibitory effect was exerted bilaterally. The globus pallidus gives no motor responses, but excitation of it converts cortically-initiated movement into “plastic tonus,” which continues for some time after withdrawal of the cortical, but during maintenance of the pallidal, stimulation. This interaction again, is mainly ipsilateral. Experiments were also made on the substantia nigra, the subthalamic nucleus of Luys, the nucleus ruber, and the striopeduncular tract; a variety of autonomic, tremulous and postural activities,

independent of cortical stimulation, are recorded. Lack of detail in the published presentation of these experiments, failing as it does to do justice to their probable merit and potential importance, is much to be deplored. But the inhibitory action of the caudate nucleus at least is supported by Rioch and Brenner's observations, and is strongly confirmed by some work of Dusser de Barenne and McCulloch (1938). These workers report that local strychninisation of areas A4—S and L4—S of Marion Hines' “strip region” (which lies between the motor and premotor areas) of the macaque's cortex suppresses the electrical activity of the arm and leg representation (A4 and L4), in the motor area. This inhibitory action is mediated by the caudate, whose electrical activity is greatly increased when A4—S and L4—S are active; direct excitation of the caudate by microinjection of strychnine also inhibits the electrical activity of A4 and L4. A mechanical lesion of the caudate temporarily releases A4 and L4, the release manifesting itself as a notable increase in their electrocorticogram. Similar evidence indicated that the thalamus is interposed in the functional pathway between the caudate and area 4. The importance of this direct demonstration of inhibition of the pyramidal motor area by an extrapyramidal cortical field, by way of part of the corpus striatum, needs no labouring.

Conclusion

All the experimental work on animals supports, or at least does not conflict with, the general conception of extrapyramidal function outlined at the beginning. But in point of detail discrepancies are rife, particularly when experiments of the pre-Wilson era are taken into account. The confusion may perhaps be traced to two main causes. First come the considerable technical difficulties related to the deep situation of the basal ganglia, involving grave probability of injury, or spread of excitation, to adjacent parts of the brain, particularly the internal capsule. Secondly, the functional importance of the striate complex is clearly different at different levels of the phylogenetic scale (Kappers, 1928); in birds, for example, the masterly stimulation and ablation studies of Rogers (1922 a, b) indicate that its importance as a motor mechanism far exceeds that of the poorly-developed mantle. It is thus hard to assess the comparative significance of similar experiments carried out on different animals. Deductions from systematic experiments on

one species can be relevant to that species alone and may not be legitimately applied

to others, least of all to man.

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APPENDIX

Body Posture in the Cat.

Their classical researches on the subject led Magnus and Rademaker to the view that the red nucleus was the most important centre for postural reflexes. But the probability of postural integration at levels rostral to the midbrain had been evident in Sherrington's discovery, in 1897, that the rigidity of a hemidecerebrate cat could be inhibited by stimulation of the opposite motor area; and since then much evidence has accumulated concerning the importance for posture of the different fields of the cat's cortex and their functional relation to the cerebellum and to the brainstem centres. For a detailed discussion of the issues reference may be made to the excellent review of Langworthy (1928). Analysis has for the most part centred on the effects of circumscribed injuries which release, to varying extents, the more caudal suprasegmental and segmental mechanisms on which the rostral levels must normally play. But such release of posture, unlike that of decerebrate rigidity, is masked in the gait; it is only evident when the cat is suspended with its back to the observer with its limbs hanging free, or when it is slung in a hammock with its limbs projecting through holes.

Explicit recognition of the different quality of decerebrate rigidity, and that of the rigidity following more rostral injuries of the brain, is due to Liddell (1938). The former, as is well known, shows the "clasp-knife effect"; the latter differs

in opposing a compressing force with solid, even resistance. Clinical neurologists have long known two similar conditions: spasticity in man resembles decerebrate rigidity in the cat, and the "lead-pipe" rigidity of Parkinsonism shares with decorticate rigidity the absence of clasp-knife collapse.

In further experiments Liddell found that small lesions of the motor area give a small amount of extensor rigidity, depending on their extent. Liddell & Phillips (1939, 1940) have since reported experiments in which electrolytic lesions were placed in different parts of the basal ganglia in cats. Such lesions also produce solid extensor rigidity in the contralateral limbs. It is masked in the gait, but, like that following cortical lesions, is clearly revealed when the cat is suspended; and is proportional in amount to the size of the lesion. It seems possible, therefore, that the basal ganglia may be interposed between the cerebral cortex and the classical tone-controlling centres of the brainstem in the normal regulation of body posture in the cat.

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Every woman her own shelter.

Many women now sleep in their corsets for warmth and a feeling of security in air-raids.—DAILY MIRROR.

An early American journal offered the following inducement: "All subscribers paying in advance will be entitled to a first-class obituary notice in case of death."

OBITUARY

JOHN GILLIES PRIESTLEY

WE regret to announce the death of John Gillies Priestley, M.C., D.M. Oxford, which occurred on February 9th.

He was at school at Eton and was a scholar of Christchurch, where he distinguished himself both in work and play. He was captain of the rowing club and twice won an oar in the Eights. At the same time he gained a first class in the physiology school. He began to work with Professor John Haldane at this time, and continued to do so after he had entered hospital in 1903, and their important paper on the regulation of lung ventilation appeared in 1905. He qualified easily and was appointed house physician by Dr. (later Sir Wilmot) Herringham. He did his work very well and was the first of Herringham's house physicians who preferred research to general practice. After working for a year with Professor Falta in Vienna he returned to hospital to take charge of the chemical pathology department in the recently erected pathology block. Up till this time the relatively few investigations of a chemical nature had been made in the chemical laboratory by Dr. Hurtley, who somehow found time to do this in addition to his routine teaching and research work for Sir Archibald Garrod. Priestley was a very thorough worker, and all his investigations were carried out with the greatest care. He did much to spread the knowledge of what could be achieved by chemical investigations. Unfortunately he developed tuberculosis of the lung in 1912, but, after a stay at Davos, made a good recovery. He was, however, advised that life in London was undesirable

and he returned to work with Haldane in Oxford. Unfortunately war broke out a year later, and he joined the R.A.M.C. in September, 1914. He was wounded at the battle of Neuve Chapelle in 1915 and awarded the Military Cross for his services in that battle. After the war he returned to Oxford, and after a little while was appointed Reader in Clinical Physiology, becoming well known to many generations of undergraduates who afterwards came to the hospital. He continued to study various aspects of the physiology of respiration, and of the secretion of urine, publishing many important papers. He was joint editor with Haldane of the last edition of *Respiration*, and devoted much care to this important book. He was also joint editor with C. G. Douglass of *Human Physiology*, and took a prominent part in starting the class of practical human physiology. He edited the physiological abstracts for some years and was an expert in the international decimal classification of scientific papers. Priestley was a man of great personal charm and very popular with all those who were at hospital between 1903 and 1912. He was always willing to help anyone who asked his advice and helped many young men who worked with him. He welcomed his friends to his fine house outside Oxford, and will be much missed by all who came in contact with him. He married Miss Elizabeth Stewart, a niece of the great Matron of the hospital, Miss Isla Stewart, who was well known to all who worked in the middle room of the old Surgery. She survives him with one son, Major Charles Priestley.

G. G.

BART'S MEN IN THE SERVICES

Since publishing a list of Bart's men in the Services in our April number, several readers have sent us additional names, of which those not lost with the rest of this number are given below.

ROYAL ARMY MEDICAL CORPS.

Bevan, F. A.
Bodley Scott, R.
Boyd, A. M.
Cane, A. S.
Catford, E.

Cullinan, E. R.
Dodd, S. A.
Miller, D. R. W.
Weddell, A. G. M.

A. M. S.

Cane, L. B.

SOUTH AFRICAN A.M.C.

Craig Cochrane, J. W.

ROYAL NAVY.

Cates, J. E.
Gale, H. E. D.

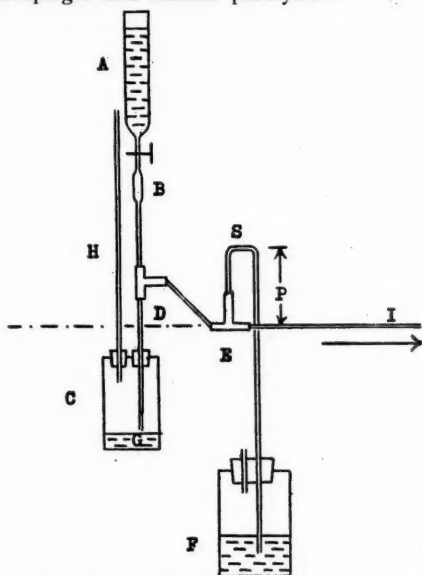
Bradley Watson, J. D.
Cane, C. S.

ROYAL AIR FORCE.

Baldwyn, A. F.

A TIDAL FLOW BLADDER IRRIGATION APPARATUS

THE following is a description of one type of tidal flow bladder irrigation apparatus, which has been employed recently in the treatment of a case of fractured spine with paraplegia and bladder paralysis.



Tube I leads to bladder.

P represents intravesical pressure when syphonage begins.

Modified from "*Cranio-Cerebral Injuries*," by Munro (Oxford University Press).

The essential pieces of apparatus are:—

- (1) Reservoir A.
- (2) Drip chamber B.
- (3) 2 glass T-pieces.
- (4) 1 length glass tubing ($3\frac{1}{2}$ ft.) H.
- (5) 1 Wolff's bottle C.
- (6) 1 large drainage bottle F.
- (7) 1 clip and miscellaneous lengths of rubber tubing.
- (8) 1 metal or wooden stand.

All the apparatus, with the exception of the reservoir A, which may be slung from the curtain rail 3-4 feet above the patient, can be attached to a metal stand.

The irrigating fluid is allowed to drip from reservoir A at a steady rate of 60 drops per minute. It passes down the tubing into bottle C. When the level here rises to tube G, which is at a lower level than tube H, the fluid rises in both bottle and tube until tube H is reached. Obviously the fluid level in the bottle now remains

constant, while the levels in both tubes rise simultaneously. On reaching connection D, the fluid runs along the side-arm to T-piece E, where it continues along the path of least resistance into the bladder. As connection E is at the level of the pubis, it is clear that the level in the syphon curve will rise with the intravesical pressure. The maximum intravesical pressure reached in any given cycle is therefore represented by height P, since syphonage will not occur until the pressure in the bladder is equal to this. Once the top of the syphon curve is reached, the system becomes a syphon, and the contents of the bladder pass over into the bottle F. Next the contents of bottle C are syphoned over into the drainage bottle, until tube G is just above the fluid level, when the syphon is broken by air entering through the manometer tube H. The cycle is then repeated.

By this method automatic filling and emptying of the bladder, at regular intervals, is secured. The length of each cycle may be controlled by either altering the drip apparatus, or adjusting the relative levels of tubes G and H in bottle C. Obviously the greater difference between the two, the longer it will be before the cycle is completed. Once functioning satisfactorily, the apparatus is unlikely to cause trouble, no harm being done even if flask A is allowed to run dry. The apparatus is attached to an indwelling soft rubber catheter, and the irrigating fluid is a mild antiseptic, e.g., mercury oxycyanide 1/8,000. The apparatus may be disconnected and resterilised as required.

Practical details to be observed are:—

- (1) Height P should be carefully adjusted to suit the patient's bladder.
- (2) Connection D should be several inches above connection E, in order to prevent the bladder contents entering bottle C during syphonage.
- (3) The lower end of the syphon tubing must always be below the fluid level in bottle F; hence when the apparatus is first used a known quantity of water should be placed in the drainage bottle and the tubing immersed in this.

We wish to thank Mr. Harold Wilson for permission to publish a description of this apparatus.

R. A. S.

D. J. R.



OWING to the absence of any worth-while events and the short time between the last letter and the end of term, this letter is not unduly long.

Lack of material is also due to the terminal examinations, the imminence of which produced the usual surprise, the usual exclamations of "I don't know a thing" and the consequent period of frantic work. The town became suddenly and strangely devoid of the familiar Bart.'s element but, after a prolonged burst of mental activity, reaction set in and the town came into its own once more.

A campaign is in progress to raise a baseball team for the summer term. This, it appears, may meet with opposition from certain other sports committees, a fact which perhaps indicates that baseball will be enthusiastically received by the students.

Any potential Babe Ruths please step forward!

The last few days of sunshine brought an admiring populace down to the Backs and college grounds. The general trend of conversation was towards matters light and fanciful. War, perhaps never a very absorbing topic in the mind of the average Cambridge student, was far out of sight and, consequently, very far out of mind.

The attractive scenery brought forth those undeveloped powers of expression:

"Bee-ootiful flowers!"

"Struth, nice pair of . . ."

But it seems that the story of the distinguished American visitor is probably apocryphal. This gentleman, confronted with King's College Chapel, is reported to have exclaimed, "Gee! That's a cute little God-box!"



WITH the best summer days ahead of us, the problem of accommodation in the lecture room will become even more acute than it is now. The room used at present in the nurses' home was not built to accommodate the large number of students who use it every afternoon. The number of chairs is insufficient, and the inadequate ventilation will, in warm weather, produce an atmosphere very conducive to sleep. A simple and very welcome solution to these problems would be the introduction of open air lectures.

A large crowd was attracted to Hill End on Wednesday, March 18th, by the Hospital seven-a-side rugger tournament. After a hard struggle in the final, the Housemen, ably assisted by Dai Griffiths, beat the Hill

End team by 8 points to 3.

On Wednesday, April 9th, a party of twenty-six people set off for the Verulam golf course to play the monthly Staff v. Students match. After a very pleasant afternoon's exercise the result was a draw.

Four days a week other more virile students turn out for an hour's physical training under the expert tuition of Mr. Sage, who is the hospital's gymnastic instructor.

Judging by the number of people who turn up for nets, the prospects for the coming cricket season appear hopeful. We have even noticed that two students, when unable to bat, are to be seen dragging a large horse roller over the proposed site of the pitch. We hope that their efforts will be rewarded.

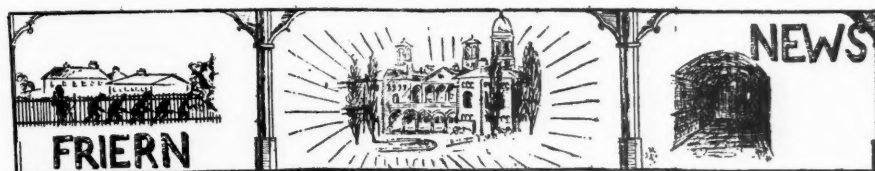
On March 19th, 20th and 21st, the Dramatic Society presented "Poison Pen," which proved to be a great success. An account of it, by our special correspondent, can be found elsewhere in this issue.

Tennis is now in full swing; any of our contemporaries who would like a fixture during the coming season should communicate with the Hon. Sec. of Tennis, Hill End Hospital, St. Albans.

The two principal Hockey events this month have been the six-a-side at Luton and Hill End. The tournament at Luton was organised by the Vauxhall Club, and a team from Hill End took part. We set out with great hopes but, owing to the alleged defect of an ancient vehicle carrying

two members of the team, our six became four. However, we managed to hold the opposition, losing the first two games by only a very narrow margin, and winning the last game when the other members of the side arrived. A more auspicious occasion was that of the tournament at Hill End. In this, teams representing the nursing staff from Bart.'s, Hill End and Cell Barnes, and the students from those places took part. A large crowd and a sunny day made it a very pleasant afternoon. The men from Bart.'s finally triumphed, beating the "pathologists" in the final. We hope this precedent will be carried on in future years.

H. H. B.



Ex Frierno nunquam aliquid noir.

Except that another room is now in use

at the Boys' Villa—for which all Friern natives have given thanks to their respective gods.

SPORTS NEWS

R.U.F.C.

v. The Wasps. Played at Chislehurst on March 15th. Won 8-3

This was not a very exciting game to watch although it had its brighter moments, but the end result was satisfactory and well deserved. The Hospital have now beaten, or drawn with, every club of note in London, a record of which the Club may be rightly proud.

Perhaps an uninteresting game is to be expected when the Wasps are one of the teams playing; for, of late years, they have concentrated more on keeping their opponents' score down than on building up their own. To do this their centres lie well up on their opposite numbers and their back row forwards break quickly from the scrum. As a result of this our centres were well held throughout. The Hospital forwards played a grand game. Their speed and fine defence laid the foundations of victory. R. L. Hall, who scored a try which would have done credit to any three-quarter, J. Moffatt and A. J. H. Spafford all got through a tremendous amount of work, while J. P. Stephens' defensive covering was as flawless as ever. Of the outside B. Jackson again played a good game. If criticisms are to be made about his play they are that his hand-off is almost entirely neglected and that he is apt to cut inside his opponent, too often straight into the arms of a covering forward. If he ran outside, his weight and speed would carry him round any but the sternest defence.

Bart.'s attacked from the start and D. Reinold nearly got over on the wing after about ten minutes' play.

The rest of the first half produced little excitement and neither side scored. In the second half, play was more eventful, and after a quarter of an hour the Wasps' right wing scored far out following a defensive muddle. This roused the side and almost immediately C. S. M. Stephen scored a neat try following a scrum on the Wasps' line. The Hospital forwards continued to dominate the game and the pace was rather too much for some of the Wasps. From a long kick ahead J. W. G. Evans fielded the ball in his own "25" and made over towards Jackson on the wing. Jackson cut back into the centre where he found Hall ready to take his pass, and Hall, selling two perfect dummies, each of which was bought, ran over, untouched, to score a very fine try. Jackson converted.

The rest of the game was fought out in midfield and except for a last burst at the end when the Hospital defence was well tried the Wasps were a beaten side.

We were sorry to see McAfee on the touchline but were very pleased to have his support and valuable criticism.

Team: J. D. Loughborough; B. Jackson, J. W. G. Evans, M. N. Laybourne, D. Reinold; N. A. Campbell, C. S. M. Stephen; J. R. Moffatt, R. J. Alcock, H. L'Etang, R. L. Hall, R. H. Sandiford, J. A. P. West, A. J. H. Spafford, J. P. Stephens.

v. King's College Hospital. Played at Chislehurst on March 22nd. Drawn 3-3

A most unsatisfactory game played in drizzling rain. With a depleted side and no scrum half available the Hospital never settled down, or rather, were never

allowed to settle down. At the beginning of the second half King's scored their try. Bart's, slightly less lethargic, then proceeded to attack for the rest of the half but their only reward was a penalty goal by Jackson.

v. Charing Cross Hospital. Played at Chislehurst on March 29th. Won 44-0

Our opponents had very sportingly turned out a side which consisted solely of Dental Students, their Medical Students being too far out of London to play. They were outclassed everywhere except in the tight scrums but throughout the game they defended gamely. Tries were scored by B. Jackson (3), J. P. Stephens (2), L. A. McAfee (2), M. Laybourne, C. S. M. Stephen and J. Moffatt. Jackson supplied the extra points in penalties and goals.

Inter-Hospital Seven-a-Sides. Played at Richmond on April 5th

After such a successful season it was a great disappointment to be beaten by King's in the second round, but seven-a-side is an entirely different game from fifteen-a-side rugby, and doubtless the Hospital would have put up a much better show had the usual "Cuppers" taken place.

The Bart's side lacked aggressiveness. Defensive play never pays in seven-a-sides and yet most of our good work was done in defence. At scrum half, C. S. M. Stephen did a tremendous amount of work and saved two certain tries by fine covering, but one would have liked to see him running with the ball more in attack, even if it meant sacrificing an occasional try.

Against Charing Cross five tries were scored by Hall (2), Campbell (2) and Laybourne. All were near the posts but only two were converted.

In the second match, the body of W. B. Young playing for King's blocked the way to their line on most occasions. Young played a fine game and set a great example to his men to which only Hall of the Bart's forwards could reply in similar fashion. After King's had scored a try, J. W. G. Evans crossed for Bart's, scoring under the posts after a very graceful run from the centre of the field. King's then added two more tries to win 9-3.

Team: J. W. G. Evans, N. A. Campbell, M. Laybourne, C. S. M. Stephen; R. L. Hall, A. J. H. Spafford and J. P. Stephens.

1st XV

On looking over this last season one notices our success without any really brilliant player in the side. We have played 21 matches of which we have won 9, lost 8 and drawn 4. Points for are 238 and against 197. We have only been beaten once in London and that was our first match of the season—against Guy's. The team did take some time to settle down and we lost the first five matches which, however, did include Oxford and Cambridge. However, since December we have been a very difficult side to beat and have only lost to the Aldershot Command, Cambridge and Bedford. Our success has been due to the intimate friendship between every member of the side and their keenness to turn out regularly every Saturday. We knew each other's play and have thoroughly enjoyed the season. We hope we may be able to say the same this time next year. The results of the matches played were as follows:—

- Oct. 5. Guy's (Away) Lost 3-11.
- „ 19. Bordon Garrison (Away) Lost 3-13.
- „ 26. O.C.T.U. Sandhurst (Away) Lost 6-8.
- Nov. 2. Oxford (Away) Lost 5-30.
- „ 9. Cambridge (Away) Lost 4-26.
- „ 23. London Hospital (Away) Won 27-5.
- „ 30. Guy's (Away) Draw 10-10.

- Dec. 7. Aldershot Command (Away) Lost 9-11.
- „ 14. St. Mary's Hospital (Away) Won 9-8.
- „ 21. Metropolitan Police (Home) Draw 0-0.
- „ 28. Northampton (Away) Draw 5-5.
- Jan. 25. Rosslyn Park (Away) Won 5-3.
- „ 29. Cambridge (Away) Lost 3-18.
- Feb. 1. Metropolitan Police (Home) Won 14-11.
- „ 8. Army XV (Home) Won 14-3.
- „ 15. Bedford (Away) Lost 14-18.
- „ 22. Metropolitan Police (Away) Won 24-3.
- Mar. 15. Wasps (Home) Won 8-3.
- „ 22. King's College Hospital (Home) Draw 3-3.
- „ 29. Charing Cross Hospital (Home) Won 44-0.
- Apr. 19. Rochester Medicos (Away) Won 24-8.

Scorers

Tries: Stephens 7, Evans 6, Griffiths 5, Jackson 5, McAfee 5, Hall 3, Campbell 3, Stephen 3, Laybourne 2, Sandiford 2, Moffatt 1, Allardice 1.

Penalties: Jackson 9.

Drop Kicks: McAfee 3.

The Annual General Meeting of the R.U.F.C. was held at noon on April 23rd in the A.R. Committee Room.

Sir Girling Ball was in the chair and fifteen members of the Club were present.

The following officers were elected:—

President: Sir Girling Ball.

Vice-presidents: Dr. Barris, Mr. Capps, Sir Charles Gordon Watson, Dr. Graham, Prof. Hadfield, Dr. Harris, Prof. Hopwood, Mr. Hosford, Mr. Hume, Mr. Naunton Morgan, Prof. Paterson Ross, Dr. Roxburgh, Dr. Shaw, Prof. Wormald.

Capt. 1st XV: R. L. Hall; Vice-capt.: L. A. McAfee; Hon. Sec.: C. S. M. Stephen; Treasurer: J. R. Moffatt.

Capt. A XV: A. G. Richards; Hon. Sec.: A XV: S. J. Merryfield.

ASSOCIATION FOOTBALL

A.F.C. v. Rahere Rovers

Home, March 30th. Won 5-0

When they last met nine years ago, the Rahere Rovers defeated the Soccer Club; this year another challenge was made and accepted. Thus, one sunny afternoon, twenty-two stalwarts faced each other breathing fire and not much water, sartorially perfect in fashions ranging from Gregory's virgin white pants to Ward's waspish camouflage. Aided and abetted by a whistle in his mouth and Golden on the touchline, George Ellis kept a masterly eye on both the players and the rules. Despite unfamiliarity with the game the Rovers played remarkably well, and against a strong team did well to be defeated by so small a margin. The result itself may be soon forgotten; but much longer will we remember Spafford's "spoiling tactics" against Wells-Cole (apparently with Harold's connivance), Tuckwell's astonishment when struck on the back of the head by the ball when he was about to barge Ward, and the grand afternoon (and evening!) had by all.

A.F.C.: G. Wells-Cole; J. T. Harold, A. Lambley; D. Harland, F. Packer, A. Danby; J. Birch, C. T. A. James, A. R. James, R. Routledge, A. I. Ward.

Rahere Rovers: J. Stephens; P. Jeffries, T. Gregory; L. McAfee, R. Sandiford, E. Tuckwell; P. Barclay, A. Spafford, R. McGrigor, N. Campbell, R. Alcock.

1st XI

The Soccer Club concluded the season with an extremely enjoyable game against Rahere Rovers, an account of which is given elsewhere in this Journal. The season has been on the whole enjoyable, although the number of matches played has been small, for various reasons. Until Christmas the team was relatively unchanged from week to week, but several of our regular players left for sector hospitals and conse-

quently the teams were more varied in the new year.

The Captain this year was G. H. Wells-Cole, and in him the Club may congratulate itself on having a really good goalkeeper, and he seems to improve each season. McShine and Harold provided a sound pair of backs, and although sometimes the former's vigour exceeded his accuracy he always put in a lot of work. Packe maintained last season's form at centre-half and certainly, with Harold, provide the mainstay of the defence. He also managed to score several excellent goals during the season, usually when we needed them most. The wing halves were chosen from Danby, Thrower and Phillips, and they all have been of real assistance to the forwards, although perhaps their covering in defence has not always been so good. Once again James was the principal goal scorer of the side and despite blitz conditions displayed all his old vigour, his headwork in particular being very effective. The only criticism would be that on occasion he worked the ball too closely, and did not use his wings to best advantage.

The wings, Kingston and Birch, have played consistently well throughout the season; they are both fast, with useful shots, and have provided James with many of his scoring chances. Routledge and Robertson have been the inside forwards, and have combined well with their respective wing men. Routledge, in addition, has scored several goals, and gives plenty of support to James in the centre.

Unfortunately we have not been able to play as frequently at Chislehurst as we would have liked, but if conditions permit next season we hope to make more use of the pitch there.

D. J. R.

SQUASH RACKETS

The Squash team made one of its rare appearances recently and beat St. Mary's Hospital convincingly by 5 matches to nil on their courts. The first three strings won their matches without great difficulty, and the fourth and fifth strings had the best games. McGrigor produced some good, some bad, shots, and not a few complete misses, but played extremely well at the right moments. Harold started badly and lost the first two games. His opponent was by then suffering from severe dyspnoea and considerable nausea, to say nothing of angina of effort and Harold won the next three games.

Final scores were:—

R. M. Mason beat G. Worden 9-3, 9-2, 9-3.

J. L. Fison beat C. M. Baker 9-2, 9-7, 9-6.

J. Robinson beat C. Newnham 9-7, 5-9, 9-7, 10-9.

R. B. McGrigor beat P. R. Murley 8-10, 9-6, 10-9, 9-6.

J. V. T. Harold beat F. Brimblecombe 5-9, 6-9, 9-4, 9-7, 9-3.

DARTS

A darts competition in aid of the Red Cross was held in "The Vicarage" early this year, and the requisite number of thirty-two entries was soon attained, including some celebrated members of the staff. The competition proved so popular that soon some more entries were made, creating yet another round, and from these late arrivals emerged the two finalists, T. Parkinson and J. Harold. These stalwarts did battle before a fine crowd in "The Vicarage," and after much pollution of the liquid refreshments Harold proved the victor by two "legs" to nil. The many losers are to be congratulated on the money they saved by not winning!

NEW BOOKS

"Principal Drugs," by A. L. Morton (Faber and Faber, Ltd., 2s. 6d.).

Another in the Faber series of potted knowledge for Nurses. It is not too short to be useful, however. A pleasant innovation is the title both on the front and back of the dust-cover.

"Modern Treatment Year Book, 1941" (Medical Press and Circular).

A useful summary, by a panel of distinguished authors, of recent advances in treatment. The most valuable section of the book is that dealing with War Medicine and Surgery, which occupies one-third of the book and contains articles on War-time Dermatoses, Gas Gangrene, Deafness due to Gunfire, Soldier's Heart, War Burns, and other subjects. Here there are important advances described. The remaining two-thirds of the book contains very little more than can be found in good modern textbooks. A single volume devoted to treatment will, however (as its Editor claims), prove

useful to General Practitioners and Service doctors. The book is adequately illustrated.

"A Short Textbook of Midwifery," by G. F. Gibberd, 2nd Edition (J. and A. Churchill, Ltd., 15s.).

The popularity of this textbook is increasing. It is essentially a *short* textbook, and certain sections should be supplemented by other reading. Dr. Gibberd writes clearly and pleasantly (we enjoyed, for instance, his felicitous exposure of the term pseudocyesis). He wisely devotes little space to abstruse mechanical theories of the passage of the fetus through the birth-canal, but in war-time, when students have fewer opportunities of studying practical midwifery, the descriptions of the management of labour might have been longer. The book is well illustrated, though not as plentifully as we would have wished. This edition contains various improvements, of which the inclusion of metric doses is the most obviously necessary.

EDITOR'S NOTE

Subscription rates for the Journal are: Life, £5 5s.; 5 years, £1 11s. 6d.; annual, 7s. 6d. Readers are reminded that these rates bear no relation to the nominal charge of 4d. per copy made to students, to limit numbers in view of paper shortage; 4d. actually by no means covers the cost of producing one copy.

The charge for Nurses (and persons working in

the Hospital) is 6d. For all others it is 9d.

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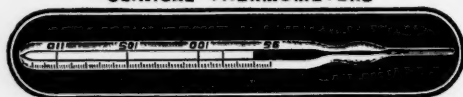
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